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758 7590 02/09/2007 FENWICK & WEST LLP SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			EXAMINER WANG, BEN C	
			ART UNIT 2192	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	10/687,941		KAYAM ET AL.	
	Examiner		Art Unit	
	Ben C. Wang		2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/17/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-61 are pending in this application and presented for examination.

Claim Rejections – 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 51 and 52 are rejected under 35 U.S.C. 101 because the claims are directed to non-statutory subject matter.

4. In claim 51, "Data-structure", "XML files", "asset files", "specification file" are being cited; however, it appears that they would reasonably be interpreted by one of ordinary skill in the art as non-functional descriptive material per se. Mere arrangements or compilations of facts or data, without any functional interrelationship, is not a process, machine, manufacture, or composition of matter. Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter, and should be rejected under 35 U.S.C. 101. (See MPEP 2106.01(II)).

5. In claim 52, "Data-structure", "XML files", "asset files", "specification file" are being cited in its depended claim; however, it appears that they would reasonably be interpreted by one of ordinary skill in the art as non-functional descriptive material per

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se. Mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter, and should be rejected under 35 U.S.C. 101. (See MPEP 2106.01(II)).

Claim Rejections – 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 60 and 61 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially", cited in claim 60, line 3, is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

9. **Claim 61** is rejected as it depended from rejected claim.

Claim Rejections – 35 USC § 102(e)

10. The following is quotation of 35 U.S.C. 102(e) which form the basis for all obviousness rejections set forth in this office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-50, 53, 57-61 are rejected under 35 U.S.C. 102(e) as being anticipated by Bowman-Amuah (hereinafter 'Bowman-Amuah') (Pat. No. US 6,601,234 B1).

12. **As to claim 1**, Bowman-Amuah discloses a method of creating an application comprising; providing a set of predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) for processing data; creating at least one node (Col. 123, 50-53, 57-58; Fig. 10), each created node being capable of receiving data (Fig. 17 – Receive) and further being capable of processing that data within the node according to the set of predetermined rules (Fig. 12, element of Business Logic) and making an output (Fig. 17 – Send); creating a specification (Fig. 15, element 1506) that defines how the or each node interacts with other nodes and defines resources useable by the nodes (Fig. 26, element 2604; Col. 97 Line 65 through Col. 98, Line 4); and providing a run time environment (Fig. 22 – COM run-time; Col. 11, Lines 3-6; Col. 22, Lines 65-67; Col. 31, Lines 52-54; Col. 181, Line 62 through Col. 182, Line 9) that interconnects the or each

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node according to the specification such that data input to the application is processed by at least one of the nodes and, if further processing is required, forwarded to other nodes (Fig. 24; Fig. 123, element 12308; Fig. 126; Fig. 183; Fig. 182, element 18210) for that further processing.

13. **As to claim 36**, Bowman-Amuah discloses a computer system arranged to create an application; the system comprising a node creation means arranged to create a definition (Fig. 15, element 1506) specifying at least one node (Col. 123, 50-53, 57-58; Fig. 10), each node being capable of processing data according to a set of predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) and generating an output therefrom (Fig. 17 – Send), the system further comprising a linking means capable of connecting at least two nodes such that data can pass between the nodes (Col. 70, Lines 1-5; Col. 104, Lines 17-21, 23-27, 36-40, 49-50) and being arranged to interact with the node creation means to modify the definition (Fig. 17), a deployment means arranged to deploy the application from the definition created by the node creation means and the linking means (Fig. 36, element 3612; Col. 128, Lines 33-38), and a specification means arranged to define a specification of how the application is deployed wherein the deployment means deploys the application according to the specification defined by the specification means (Fig. 36, element 3606; Fig. 50, elements of Analysis, Operation Definition, Operation Diagram, Workflow etc.).

14. **As to claim 53**, Bowman-Amuah discloses a method of implementing an application comprising: creating a plurality of nodes (Fig. 10, elements – Client Node (1000, 1002, 1006, 1022, 1016, and 1012), Server Node (1020, 1004, 1008, 1024, 1018, and 1014; Fig. 16, elements of CLIENT and SERVER; Fig. 23; Fig. 30, elements - 3000, plurality of 3002; Fig. 124; Col. 7, Lines 30-32; Col. 31, Lines 54-64) and predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23), each node being capable of receiving data (Fig. 17 – Receive), processing that data according to a set of predetermined rules and making an output (Fig. 17 – Send); interconnecting the plurality of nodes (Fig. 10, elements 1006, 1010, 1008) such that data input (Fig. 17 – Receive) to the application is processed by at least one of the nodes and if further processing is required, forwarded to other nodes for that further processing (Fig. 24; Fig. 123, element 12308; Fig. 126; Fig. 183; Fig. 182, element 18210).

15. **As to claim 57**, Bowman-Amuah discloses a computer system comprising a memory (Fig. 1, elements 114, 116, 120) and processing means arranged to process instructions held in the memory (Fig. 1, element 110) wherein the memory is arranged to hold files containing data, at least one of the files defining a specification (Fig. 36, element 3606; Col. 41, Lines 39-48; Fig. 50, elements of Operation Definition, Operation Diagram, Workflow, UI Definition, Class Diagram etc.,), at least one of the files defining a node capable of processing data (Fig. 71; Col. 213, Lines 16-25; Fig. 74, elements of Update Interface, Browsing Interface (7402)), and at least one of the files providing logic

defining how the or each node should function (Fig. 10, elements 1022, 1024 – Business Logic; Fig. 11, element of Business Logic – Interface, Application Logic, and Data Abstraction; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23), the specification being arranged to define how that node should process data (Fig. 15, element 1506).

16. **As to claim 58**, Bowman-Amuah discloses a method of creating an application comprising; providing a set of predetermined rules for processing data; creating a plurality of nodes (Col. 62, Lines 51-67), each node being capable of receiving data (Fig. 17 – Receive) and further being capable of processing that data within the node according to the set of predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) and making an output (Fig. 17 – Send); each node comprising a plurality of layers (Fig. 10, elements 1010, 1006, 1022, 1012 etc), each layer being arranged to perform a predetermined function (Col. 31, Lines 52-60); creating a specification that defines how the nodes interact with one another (Fig. 15, element 1506) and defines resources useable by the nodes (Fig. 26, element 2604; Col. 97 Line 65 through Col. 98, Line 4); arranging at least one of the layers of a node to act as a message transceiver arranged to send (Fig. 17 – Send) and receive (Fig. 17 – Receive) messages to other nodes to which that node is connected (Fig. 16 – Network Connections); providing a run time environment (Fig. 22 – COM run-time; Col. 11, Lines 3-6; Col. 22, Lines 65-67; Col. 31, Lines 52-54; Col. 181, Line 62 through Col. 182, Line 9) that interconnects the nodes

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according to the specification such that data input to the application is processed by at least one of the nodes and, if further processing is required, forwarded to other nodes using the message transceiver layer for that further processing (Fig. 24; Fig. 123, element 12308; Fig. 126; Fig. 183; Fig. 182, element 18210).

17. **As to claim 59**, Bowman-Amuah discloses a computer system arranged to create an application; the system comprising a processor (Fig. 1, element 110) programmed to create a definition specifying at least one node, each node being capable of processing data according to a set of predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) and generating an output therefrom (Fig. 17 – Send), the processor being further programmed to create a definition to link at least two nodes such that data can pass between the nodes, the processor being further arranged to deploy the application from the definitions created specifying the at least one node and the definition linking the at least two nodes (Col. 70, Lines 1-5; Col. 104, Lines 17-21, 23-27, 36-40, 49-50), and the processor being further programmed to provide a specification as to how nodes should interact (Fig. 15, element 1506).

18. **As to claim 60**, Bowman-Amuah discloses a processing apparatus having a processor (Fig. 1, element 110) and memory the memory containing both program code and data (Fig. 1, elements 120, 114, 116) wherein the program code and the data are substantially written in XML (Col. 41, Lines 39-48).

19. **As to claim 2**, Bowman-Amuah discloses a method in which a plurality of nodes are created (Fig. 10, elements – Client Node (1000, 1002, 1006, 1022, 1016, and 1012), Server Node (1020, 1004, 1008, 1024, 1018, and 1014; Fig. 16, elements of CLIENT and SERVER; Fig. 23; Fig. 30, elements - 3000, plurality of 3002; Fig. 124; Col. 7, Lines 30-32; Col. 31, Lines 54-64).

20. **As to claim 3**, Bowman-Amuah discloses a method which further comprises providing a library of nodes containing at least one node and selecting at least one of the nodes from the library of nodes (Col. 13, Lines 30-38; Col. 14, Lines 15-24; Fig. 10, Col. 31, Lines 52-60).

21. **As to claim 4**, Bowman-Amuah discloses a method which further comprises arranging the or each node to comprise a plurality of layers (Fig. 10, elements 1010, 1006, 1022, 1012 etc), each layer being arranged to perform a predetermined function (Col. 31, Lines 52-60).

22. **As to claim 5**, Bowman-Amuah discloses a method which further comprises arranging the layers of the nodes to be interchangeable (Col. 78, Lines 35-40) and wherein altering at least one of the layers can change the overall functionality of a node (Col. 12, Line 49 through Col. 13, Line 6).

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23. **As to claim 6**, Bowman-Amuah discloses a method which further comprises providing a library of layers containing at least one layer and selecting at least one layer from the library of layers (Col. 13, Lines 30-38; Col. 76, Line 6 through Col. 77, Line 10; Col. 99, Lines 15-16; Fig. 32; Col. 112, Lines 31-32).

24. **As to claim 7**, Bowman-Amuah discloses a method which comprises arranging at least one of the layers of a node to act as a transport layer arranged to receive and send data to and from the node (Fig. 24, element 2402; Col. 52, Lines 11-16; Col. 84, Lines 11-24; Fig. 17).

25. **As to claim 8**, Bowman-Amuah discloses a method which comprises arranging at least one of the layers of a node to act as a message transceiver arranged to send and receive messages to other nodes to which that node is connected (Col. 84, Lines 25-50).

26. **As to claim 9**, Bowman-Amuah discloses a method in which the at least one node has an identity and in which the application is arranged to be run and, at runtime, as nodes are connected together (Fig. 22 – COM run-time; Col. 11, Lines 3-6; Col. 22, Lines 65-67; Col. 31, Lines 52-54; Col. 181, Line 62 through Col. 182, Line 9), the method further comprising arranging the message transceiver layer of a node to discover the identity of nodes to which it is connected at runtime (Fig. 24, elements 2402, 2404, 2406; Col. 84, Lines 11-24).

27. **As to claim 10**, Bowman-Amuah discloses a method which comprises arranging at least one of the layers of a node to act as a rule processing engine arranged (Fig. 10, 1022; Col. 31, Lines 52-60; Fig. 12, elements of Business Logic, Rule Management; Fig. 33; Fig. 55, elements 5504, 5510; Fig. 143; Fig. 179, element 17904) to apply the predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) to data that the node receives (Fig. 17 – Receive).

28. **As to claim 11**, Bowman-Amuah discloses a method in which the rule processing engine layer of a node is arranged to use forward chaining rule logic (Fig. 24; Fig. 123, element 12308; Fig. 126; Fig. 183; Fig. 182, element 18210).

29. **As to claim 12**, Bowman-Amuah discloses a method which comprises providing a rule set of at least one rule in a file (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) that is used by the rule processing engine (Fig. 10, 1022; Col. 31, Lines 52-60; Fig. 12, elements of Business Logic, Rule Management; Fig. 33; Fig. 55, elements 5504, 5510; Fig. 143; Fig. 179, element 17904).

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30. **As to claim 13**, Bowman-Amuah discloses a method which comprises specifying the file in which the rules are located by a link (Col. 42, Lines 32-34; Col. 120, Lines 15-20).

31. **As to claim 14**, Bowman-Amuah discloses a method which comprises defining each rule set that is to be used by the application in the specification (Fig. 33; Col. 120, Lines 3-14).

32. **As to claim 15**, Bowman-Amuah discloses a method which comprises defining at least one predetermined message that can be passed between the nodes (Col. 296, Lines 62-65; Col. 297, Lines 61-66; Col. 298, Lines 1-6).

33. **As to claim 16**, Bowman-Amuah discloses a method which comprises defining the messages that are to be used by the application in the specification (Col. 297, Lines 15-23; 39-47; Col. 298, Lines 1-6).

34. **As to claim 17**, Bowman-Amuah discloses a method which comprises writing the messages in a fiat text format, which may be any of the following: ASCII (Col. 56, Lines 55-60), XML (Col. 41, Lines 39-48), EDI (Electronic Data Interchange) (Col. 78, Line 35 through Col. 79, Line 9).

35. **As to claim 18**, Bowman-Amuah discloses a method which comprises processing the at least one predetermined messages (Col. 296, Lines 62-65; Col. 297, Lines 61-66; Col. 298, Lines 1-6) within a node using the predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23).

36. **As to claim 19**, Bowman-Amuah discloses a method in which the predetermined rules (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) are arranged to be triggered and which comprises triggering rules only if the at least one predetermined message contains predetermined trigger data (Col. 249, Lines 17-18; Col. 39, Lines 3-7; Col. 109, Lines 53-55).

37. **As to claim 20**, Bowman-Amuah discloses a method which comprises providing a pattern, arranging the at least one node within the pattern and defining how nodes therein interact with one another (Fig. 54; Col. 192, Lines 46-59).

38. **As to claim 21**, Bowman-Amuah discloses a method which comprises providing a library of patterns containing at least one pattern that can be used in creating an application (Fig. 54; Col. 192, Line 46 through Col. 194, Line 7).

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39. **As to claim 22**, Bowman-Amuah discloses a method in which the specification is arranged to determine at least one of the following: which nodes are to be used; which nodes interact with one another; which patterns are to be used; which assets are to be used (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS; Fig. 39, elements 3906, 3908; Fig. 40, element 4006; Fig. 42, element of User Interface Component).

40. **As to claim 23**, Bowman-Amuah discloses a method which comprises providing files arranged to define the application specified therein (Fig. 36, element 3606), arranging the specification to be capable of deploying files (Fig. 36, element 3608) and using the specification to deploy the files (Fig. 36, element 3612).

41. **As to claim 24**, Bowman-Amuah discloses a method which comprises arranging the files specifying the application to be XML files (Col. 41, Lines 14-28, 39-48).

42. **As to claim 25**, Bowman-Amuah discloses a method in which the data processed by the application is specified in an XML file (Col. 41, Lines 14-28, 39-48).

43. **As to claim 26**, Bowman-Amuah discloses a method in which data processed by the application is specified in an image file (Col. 36, Lines 8-12).

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44. **As to claim 27**, Bowman-Amuah discloses a method in which data processed by the application is specified in a fiat text file such as an ASCII file (Col. 56, Lines 55-60), a raw text file (Col. 73, Lines 1-33), and EDI file (Col. 78, Line 35 through Col. 79, Line 9).

45. **As to claim 28**, Bowman-Amuah discloses a method which comprises providing a graphical tool arranged to enable a user to specify components of the application (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS; Fig. 39, elements 3906, 3908; Fig. 40, element 4006; Fig. 42, element of User Interface Component).

46. **As to claim 29**, Bowman-Amuah discloses a method which comprises providing a library of at least one of the following: nodes (Col. 123, 50-53, 57-58; Fig. 10); node layers (Fig. 10, elements 1010, 1006, 1022, 1012 etc); specification (Fig. 15, element 1506); patterns (Fig. 54; Col. 192, Line 46 through Col. 194, Line 7); messages (Fig. 15, element 1506); rule sets (Fig. 33); style sheets (Col. 40, Lines 33-42); schemas (Col. 155, Lines 52-62) and in which the graphical tool allows a user to select components from one of the libraries (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS; Fig. 39, elements 3906, 3908; Fig. 40, element 4006; Fig. 42, element of User Interface Component).

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47. **As to claim 30**, Bowman-Amuah discloses a method which allows a user to define further libraries (Col. 13, Lines 30-38).

48. **As to claim 31**, Bowman-Amuah discloses a method which comprises providing at least one pattern arranged to define how nodes interact arranging the at least one pattern such that it is capable of interacting with at least one other pattern (Fig. 54; Col. 192, Lines 46-59) and arranging the graphical tool to allow a user to specify how the patterns and nodes interact with one another (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS; Fig. 39, elements 3906, 3908; Fig. 40, element 4006; Fig. 42, element of User Interface Component).

49. **As to claim 32**, Bowman-Amuah discloses a method which comprises using the graphical tool to perform at least one of the following: create the specification; edit the specification (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS; Fig. 39, elements 3906, 3908; Fig. 40, element 4006; Fig. 42, element of User Interface Component).

50. **As to claim 33**, Bowman-Amuah discloses a method which comprises using the graphical tool to manipulate any components of the specification (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS).

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51. **As to claim 34**, Bowman-Amuah discloses a method which comprises creating and deploying files and processing the files (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS) in the run time environment (Fig. 22 – COM run-time; Col. 11, Lines 3-6; Col. 22, Lines 65-67; Col. 31, Lines 52-54; Col. 181, Line 62 through Col. 182, Line 9).

52. **As to claim 35**, Bowman-Amuah discloses a method in which at least one node is provided to provide an output from the application (Fig. 17 – Send).

53. **As to claim 37**, Bowman-Amuah discloses a computer system which comprises at least one processor (Fig. 1, element 110) arranged to process data, including the definition, and on which the definition created by the node creation means and modified by the linking means is processed.

54. **As to claim 38**, Bowman-Amuah discloses a computer system which comprises at least one processing apparatus comprising the at least one processor and in which the linking means is arranged to connect nodes running on the processor within the processing apparatus (Col. 70, Lines 1-5; Col. 104, Lines 17-21, 23-27, 36-40, 49-50).

55. **As to claim 39**, Bowman-Amuah discloses a computer system which comprises a plurality of processors (Fig. 66, element 6600; Col. 195, Lines 44-47), each remote

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from the other and having a connecting means (Fig. 10, elements 1006, 1010) there between capable of transmitting data (Fig. 66, element 6602) between the processors.

56. **As to claim 40**, Bowman-Amuah discloses a computer system in which each of the processors is provided on a separate processing apparatus (Fig. 16 – CLIENT and SERVER; Fig. 23, elements 2300, 2302).

57. **As to claim 41**, Bowman-Amuah discloses a computer system in which the linking means is arranged to connect nodes provided on processors remote from one another (Fig. 23; Col. 212, Lines 45-51; Col. 218, Lines 61-65).

58. **As to claim 42**, Bowman-Amuah discloses a computer system in which the deployment means deploys the definition that causes the nodes to communicate with one another using one of HTTP (Col. 42, Lines 55-58; Col. 68, Lines 23-41) and direct memory protocols (Col. 68, Lines 16-22, 42-44).

59. **As to claim 43**, Bowman-Amuah discloses a computer system in which the node creation means is arranged to utilise at least one of the following: predetermined definitions (Fig. 10, elements 1022, 1024; Fig. 11, element of Business Logic; Fig. 33, Fig. 173, element 17306; Col. 288, Lines 10-23) and pre-written definitions (Col. 117, Line 58 through Col. 118, Line 2).

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60. **As to claim 44**, Bowman-Amuah discloses a computer system in which the pre-written definition is provided in at least one library (Col. 212, Lines 45-51).

61. **As to claim 45**, Bowman-Amuah discloses a computer system which further comprises a pattern creation means arranged to create at least one pattern of nodes (Col. 104, Lines 49-56).

62. **As to claim 46**, Bowman-Amuah discloses a computer system which further comprises a pattern cloning means arranged to clone a pattern of nodes (Col. 263, Lines 13-19).

63. **As to claim 47**, Bowman-Amuah discloses a computer system which further comprises a rule creation means arranged to allow predetermined rules to be created and edited (Fig. 51 – Operation Definition, Operation Diagram, Workflow, Visio, Rational Rose, Visual Basic IDE, VSS).

64. **As to claim 48**, Bowman-Amuah discloses a computer system which further comprises at least one of the following: a node storage means; a pattern storage means; a rule storage means (Fig. 1, element 120; Fig. 14, element 1414).

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65. **As to claim 49**, Bowman-Amuah discloses a machine readable medium containing instructions which when read onto a computer cause that computer to perform the method (Fig. 1, elements 110, 114, 120, 122, 126, 134, 138).

66. **As to claim 50**, Bowman-Amuah discloses a machine readable medium containing instructions which when read onto a computer cause that computer to function as the computer system (Fig. 1, elements 110, 114, 120, 122, 126, 134, 138).

67. **As to claim 61**, Bowman-Amuah discloses an apparatus in which the memory (Fig. 1, element 114, 120) holds presentation data specifying how output from the apparatus should be presented the presentation data being held in the same format as the program code and the data (Fig. 10, element 1000; Fig. 11, element of Presentation; Fig. 122, elements of 'Distributed Presentation', 'Remote Presentation'; Fig. 123, elements 12302, 12303, 12310).

Claim Rejections – 35 USC § 103(a)

68. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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69. Claims 51-52, 54-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman-Amuah in view of Kuznetsov et al. (Pub No. US 2006/0265689 A1) (hereinafter 'Kuznetsov')

70. **As to claim 51**, Bowman-Amuah discloses the XML files comprising a specification file (Col. 41, Lines 25-28 – second part) and a plurality of asset files (Col. 41, Lines 23-25 – first part).

But Bowman-Amuah does not disclose a data-structure comprising a plurality of XML files; the asset files being capable of interacting with one another and the specification file determining how the asset files interact with one another to provide an application.

However, in an analogous art of processing XML based messages in a network, Kuznetsov discloses a data-structure comprising a plurality of XML files (Abstract; Fig. 1; [0043]); the asset files being capable of interacting with one another ([0013], Lines 12-31) and the specification file determining how the asset files interact with one another to provide an application ([0014], Lines 20-24).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Bowman-Amuah and the teachings of Kuznetsov to further provide a data-structure comprising a plurality of XML files; the asset files being capable of interacting with one another and the specification file determining how the asset files interact with one another to provide an application in Bowman-Amuah system.

The motivation is that (a) the markup language processing node is capable of parsing XML data streams, performing encryption, decryption, digital signing, digital signature verification or other cryptographic operations on XML-encoded data streams within a network, thus offloading such task from a server; (b) the markup language processing node is also capable of parsing and pre-processing one or more rule sets and can dynamically generate code by compiling the rules and a set of transformations; (c) Further, the markup language processing node can provide a message transformation process module capable of dynamically compiling user-defined security policies and generating optimized byte-code, machine code, FPGA/PLD-programs or other codes for execution on a markup processor as once suggested by Kuznetsov ([0023], Lines 1-6; [0026], Lines 1-4; [0027], Lines 1-6).

71. **As to claim 54**, Bowman-Amuah discloses a method of creating an application defined in software, the method comprising providing an XML file defining a specification (Col. 41, Lines 25-28 – second part).

But Bowman-Amuah does not disclose providing at least one node defined by an XML file arranged to be capable of interacting with other nodes according to the specification in order to process data to provide the application.

However, in an analogous art of processing XML based messages in a network, Kuznetsov discloses providing at least one node defined by an XML file arranged to be capable of interacting with other nodes according to the specification in order to process

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data to provide the application ([0013], Line 12-31; [0033]; Fig. 1; [0060], Lines 15-20; Fig. 3; [0077]).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to combine the teachings of Bowman-Amuah and the teachings of Kuznetsov to further provide providing at least one node defined by an XML file arranged to be capable of interacting with other nodes according to the specification in order to process data to provide the application in Bowman-Amuah system.

The motivation is that (a) the markup language processing node is capable of parsing XML data streams, performing encryption, decryption, digital signing, digital signature verification or other cryptographic operations on XML-encoded data streams within a network, thus offloading such task from a server; (b) the markup language processing node is also capable of parsing and pre-processing one or more rule sets and can dynamically generate code by compiling the rules and a set of transformations; (c) Further, the markup language processing node can provide a message transformation process module capable of dynamically compiling user-defined security policies and generating optimized byte-code, machine code, FPGA/PLD-programs or other codes for execution on a markup processor as once suggested by Kuznetsov ([0023], Lines 1-6; [0026], Lines 1-4; [0027], Lines 1-6).

72. **As to claim 52**, Bowman-Amuah discloses a machine readable medium containing instructions provide the data structure (For example, Fig. 1, elements 116, 120, 126, 138; Col. 308, Line 48 through Col. 309, Line 30).

73. **As to claim 55**, Bowman-Amuah discloses the method which comprises providing the nodes as separate XML files (Col. 41, Lines 14-28, 39-48).

74. **As to claim 56**, Bowman-Amuah discloses a machine readable medium containing instructions which when read onto a computer cause that computer to provide the method (Fig. 1, elements 110, 114, 120, 122, 126, 134, 138).

Conclusion

75. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Bunker et al., *System and Method for Describing Application Extensions in XML* (Pub. No. US 2005/0240902 A1).
- Zimmer et al., *System and Method for Multiple Level Architecture By Use of Abstract Application Notation* (Pat. No. US 7,043,716 B2).
- Westerinen et al., *System and Method to Automate the Management of Computer Services and Programmable Devices* (Pat. No. US 7,065,740 B2).
- R. Kraft, *Designing a Distributed Access Control Processor for Network Services on the Web*, 2002, ACM

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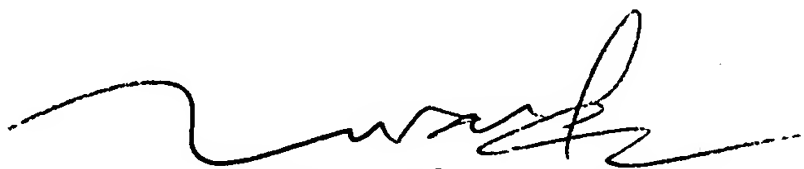
76. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben C. Wang whose telephone number is 571-270-1240. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BCW

BW


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SUPERVISORY PATENT EXAMINER

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